

REMARKS

Claims 1-18 were pending in the Application prior to the outstanding Office Action. With this Amendment, claims 1, 2, 4-9 and 11-20 remain in the case.

Support for new claims 19 and 20 can be found at page 6, lines 28-32 of the English translation.

The Examiner has objected to the Abstract because it is longer than 150 words and the language used is not in accordance with current USPTO guidelines. Applicants have prepared an replacement Abstract on a separate sheet for approval by the Examiner.

The Examiner has objected to the specification because the proper headings are not presented for various sections of the specification. Appropriate amendments have been made to the specification in response to this objection.

The Examiner has objected to claim 1 for formal reasons. Claim 1 has been amended to obviate the formal grounds of rejection.

The Examiner has rejected claims 3-6, 8, 9, 10, 12, 13, 16 and 17 under 35 U.S.C. §112. Claims 3 and 10 have been canceled. Applicants have amended claim 4 to change "a flat, supporting surface for the semi-conductor wafer" to read "a flat support structure for the semi-conductor wafer" to remove the grounds for this rejection. Applicants have amended claim 6 to clarify the relationship among various components to remove the basis for the §112 rejection of claim 6. The dependency of claim 17 has been corrected to provide proper antecedent bases for "the arresting system". Accordingly, a §112 rejections of the claims have all been addressed.

The Examiner has rejected claims 1-3, 7, 11, 14, 15, 17 and 18 under 35 U.S.C. §103(a) as being unpatentable over Rosenquist et al. (US 6,188,323) in view of Cheng (US 6,053,688), and further in view of Whitcomb (US 6,468,022).

Applicant notes with appreciation that claim 4 has been objected to but the Examiner has indicated it would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. §112, second paragraph, set forth in this office action and to include all of the limitations of the base claim and any intervening claims. Applicants have done so claim 4 his now allowable.

The Cited Art

The **Rosenquist** patent discloses a device for determining the presence of and mapping the location of wafers. Wafer mapping system 38 includes a transmitter assembly 40 and a

receiver assembly 42. Transmitter assembly 40 includes a transmitter 44 at the end of a finger 46. Receiver assembly 42 includes a receiver 53 on a finger 54. Fingers and 46, 54 are pivotally mounted to the port door 22 so to extend into the container for sensing the wafers.

The **Cheng** patent discloses apparatus 100 including a wafer holding station 112 containing a pod 120 of stacked wafers. Apparatus 100 also includes an interface panel 114, a door opening mechanism 116 and a wafer handler mechanism 118. Pod 120 has a door 138 that is removed by the door opening mechanism 116. Access to door 138 is provided by a main opening 136 in the interface panel 114 and an opening 137 in moving panel 115 of the wafer holding station 112. After door 138 is removed and pulled into opening 136, see figure 3D, pod 120 can be raised so that a selected wafer is aligned with an access opening 140 formed in wafer handling mechanism 118. This permits an end effector 172 to pass through access opening 140, lift up a wafer and removed the wafer from pod 120.

The **Whitcomb** patent discloses the use of three rollers to engage the outer edge of a wafer.

The Cited Art Distinguished

Independent claim 1 recites in part means of picking up (2) at least one semi-conductor wafer (11), along with moving means and linking means. As discussed above, Rosenquist is directed to a mapping system and shows no structure whatsoever for grasping and removing wafers. That is, Rosenquist does not disclose a wafer handling tool and therefore cannot disclose movement of a wafer from one side of a port to another side of the port. Nothing in the cited art references suggests adding wafer handling structure to the apparatus of Rosenquist because Rosenquist is not concerned with wafer transfer. If one were to assume, for sake of discussion, that it would have been obvious to modify the structure of Rosenquist to add wafer handling structure, there is nothing in the art suggesting that the resulting structure would be the same as our equivalent to applicants' claimed invention. Accordingly, claim 1 is allowable over the cited art.

The **dependent claims** are directed to specific novel sub features of the invention and are allowable for that reason as well as by depending from novel parent claims. For example, **claim 6** recites that the first and second arms of the wafer pickups (2) lie vertically above the shutter in their initial position and laterally offset from the plane of the aperture when in their

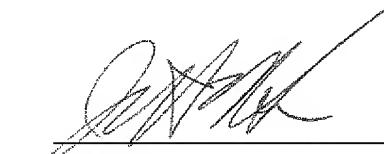
moving arm position; Rosenquist does not show any structure for handling wafers and the Cheng and Whitcomb references fail to teach or suggest the claimed wafer handling arms. Similarly, the art fails to disclose or suggest the structure of the third arm specified in **claim 7** or the other structural features specified in, for example, **claim 8** (coupling between the arms), **claim 11** (arms lying between the shutter planes) and **claims 12 and 13** (automatic deploying means). Also, the art fails to disclosure or suggest a movable drive roller (30) integral with the shutter (1) as in **claim 15**. Any disclosure or suggestion of the means for arresting (35) the pickups' (2) mechanism (3) of **claims 16 and 17** is absent from the art. There is nothing in the art disclosing were suggesting the claimed roller structure of **claims 19 and 20**.

CONCLUSION

It is respectfully submitted that this application is now in condition for allowance, and such action is requested. If the Examiner believes a telephone conference would aid the prosecution of this case in any way, please call the undersigned at (650) 712-0340.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (RCIF 1002-2).

Respectfully submitted,



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